

## ABSTRACT

The invention disclosed herein improves upon existing tissue microarray technology by using frozen tissues embedded in tissue embedding compound as donor samples and arraying the specimens into a recipient block comprising tissue embedding compound. Tissue is not fixed prior to embedding, 5 and sections from the array are evaluated without fixation or post-fixed according to the appropriate methodology used to analyze a specific gene at the DNA, RNA, and/or protein levels. Unlike paraffin tissue arrays which can be problematic for immunohistochemistry and for RNA *in situ* hybridization analyses, the disclosed methods allow optimal evaluation by each technique and uniform fixation across the array panel. The disclosed arrays work well for DNA, RNA, and protein analyses, and have 10 significant qualitative and quantitative advantages over existing methods.

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